What is claimed is:

1. A compound comprising: (a) a platinum metal center (b) two cis labile ligands bonded to the platinum metal center, and (c) one or more therapeutic agents and/or targeting moieties covalently attached to the platinum metal center, wherein the therapeutic agent is not covalently attached to the platinum metal center through the cis labile ligands.

2. The compound of claim 1, wherein the compound further comprises two cis non-labile ligands bonded to the platinum metal center, and wherein the therapeutic agent is not covalently attached to the platinum metal center through the cis non-labile ligands.

3. The compound of claim 1, wherein the two cis labile ligands are halides.

4. The compound of claim 3, wherein the halides are chlorides.

5. The compound of claim 1, wherein the therapeutic agent is a steroid.

6. The compound of claim 5, wherein the steroid is estrogen.

7. The compound of claim 1, wherein the targeting moiety is a peptide.

8. The compound of claim 7, wherein the peptide comprises asparagine, glycine, and arginine.

9. The compound of claim 1, wherein the therapeutic agent is covalently attached to the metal center through a tether.

10. The compound of claim 9, wherein the therapeutic agent is a steroid.

11. The compound of claim 10, wherein the steroid is estrogen.

12. The compound of claim 1, wherein the targeting moiety is covalently attached to the metal center through a tether.

13. The compound of claim 12, wherein the targeting moiety is a peptide.

14. The compound of claim 13, wherein the peptide comprises asparagine, glycine, and arginine.

15. The compound of claim 1, wherein the compound has the following formula:

wherein:

X, independently for each occurrence, represents a labile covalently bonded ligand, or both of X taken together represent a bidentate ligand;

L, independently for each occurrence, represents a ligand bonded to the platinum metal center through a covalent bond, or both of L taken together represent a bidentate ligand;

M represents a therapeutic agent, a targeting moiety, or a labile covalently bonded ligand; and

R represents a therapeutic agent or a targeting moiety.

16. The compound of claim 15, wherein M is a labile covalently bonded ligand and not a therapeutic agent or targeting moiety.

17. The compound of claim 15, wherein the compound is charged.

18. The compound of claim 15, wherein M is a therapeutic agent and is the same as R.

19. The compound of claim 15, wherein M is a therapeutic agent and is different than R.

20. The compound of claim 15, wherein M is a targeting moiety and is the same as R.

21. The compound of claim 15, wherein M is a targeting moiety and is different than R.

22. The compound of claim 15, wherein X, independently for each occurrence, is selected from the group consisting of halide, -O-alkyl, -O-aryl, alkyl, and aryl.

23. The compound of claim 15, wherein both of X are Cl.

24. The compound of claim 15, wherein at least one L is NH_3.

25. The compound of claim 15, wherein both of X are Cl, both of L are NH_3, R is a tethered steroid wherein the steroid is estrogen, and the tether comprises an amide moiety.

26. The compound of claim 15, wherein both of X are Cl, both of L are NH_3, R is a tethered peptide comprising asparagine, glycine, and arginine, and the tether comprises an amide moiety.

27. The compound of claim 15, wherein both of X are Cl, both of L are NH_3, both R and M are tethered steroids wherein the steroids are estrogen, and the tethers comprise an amide moiety.

28. The compound of claim 15, wherein both of X are Cl, both of L are NH_3, both R and M are tethered peptides comprising asparagine, glycine, and arginine, and the tethers comprise an amide moiety.

29. The compound of claim 15, wherein both of X are Cl, both of L are NH_3, both R and M are a tethered steroids wherein one steroid is estrogen and the other steroid is not, and the tethers comprise an amide moiety.

30. The compound of claim 15, wherein both of X are Cl, both of L are NH_3, R is a tethered steroid wherein the steroid is estrogen, M is a tethered peptide comprising asparagine, glycine, and arginine, and the tethers comprise an amide moiety.

31. A compound comprising a platinum metal center, two cis labile ligands covalently bonded to the platinum metal center, two cis non-labile ligands covalently bonded to the platinum metal center, and at least one therapeutic agent covalently tethered to the platinum metal center, wherein upon reduction in the platinum metal center from a +4 oxidation state to a +2 oxidation state the therapeutic agent is released form the platinum metal center.

32. A compound comprising a platinum metal center, two cis labile ligands covalently bonded to the platinum metal center, two cis non-labile ligands covalently bonded to the platinum metal center, and at least one targeting moiety covalently tethered to the platinum metal center, wherein upon reduction in the platinum metal center from a +4 oxidation state to a +2 oxidation state the targeting moiety is released form the platinum metal center.

33. The compound of claim 31, wherein after release of the therapeutic agent from the platinum metal center, the compound comprising the platinum metal center is therapeutically effective.

34. The compound of claim 32, wherein after release of the targeting moiety from the platinum metal center, the compound comprising the platinum metal center is therapeutically effective.

35. A composition comprising any of the compounds of claims 1-34 and a pharmaceutically effective excipient.

36. A method of treating cancer, comprising administering to a subject any of the compounds of claims 1-34 or a combination thereof.

37. The method of claim 36, wherein at least some of the cancer cells for the cancer to be treated comprise a receptor for the therapeutic agent.

38. The method of claim 36, wherein after release from the platinum metal center after administration, the therapeutic agent causes increased expression of HMG.

39. The method of claim 36, wherein the subject has cancer cells that express a receptor for the therapeutic agent.

40. The method of claim 36, wherein prior to administering the compound comprising the platinum metal center, at least some of the cancer cells of the cancer to be treated are first determined to express a type of receptor for the therapeutic agent.

41. The method of claim 39, wherein the cancer cells express estrogen ER(+) receptors.

42. A kit comprising any of the compounds of claims 1-34 or a combination thereof and instructions for administering the compound to a patient.